SCHNETZLER

A design for a City Municipal Building

Architecture

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A DESIGN FOR A CITY MUNICIPAL BUILDING

BY

CHARLES HENRY SCHNETZLER

THESIS

FOR THE

DEGREE OF BACHELOR OF SCIENCE

IN

ARCHITECTURE

COLLEGE OF ENGINEERING

UNIVERSITY OF ILLINOIS

1910

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June 2 1910

THIS IS TO CERTIFY THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

CHARLES HENRY SCHNETZLER

ENTITLED A DESIGN FOR A CITY MUNICIPAL BUILDING

IS APPROVED BY ME AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE

DEGREE OF BACHELOR OF SCIENCE IN ARCHITECTURE.

John Watrous Case.
Instructor in Charge

APPROVED: N. Clifford Ricker

HEAD OF DEPARTMENT OF Architecture.

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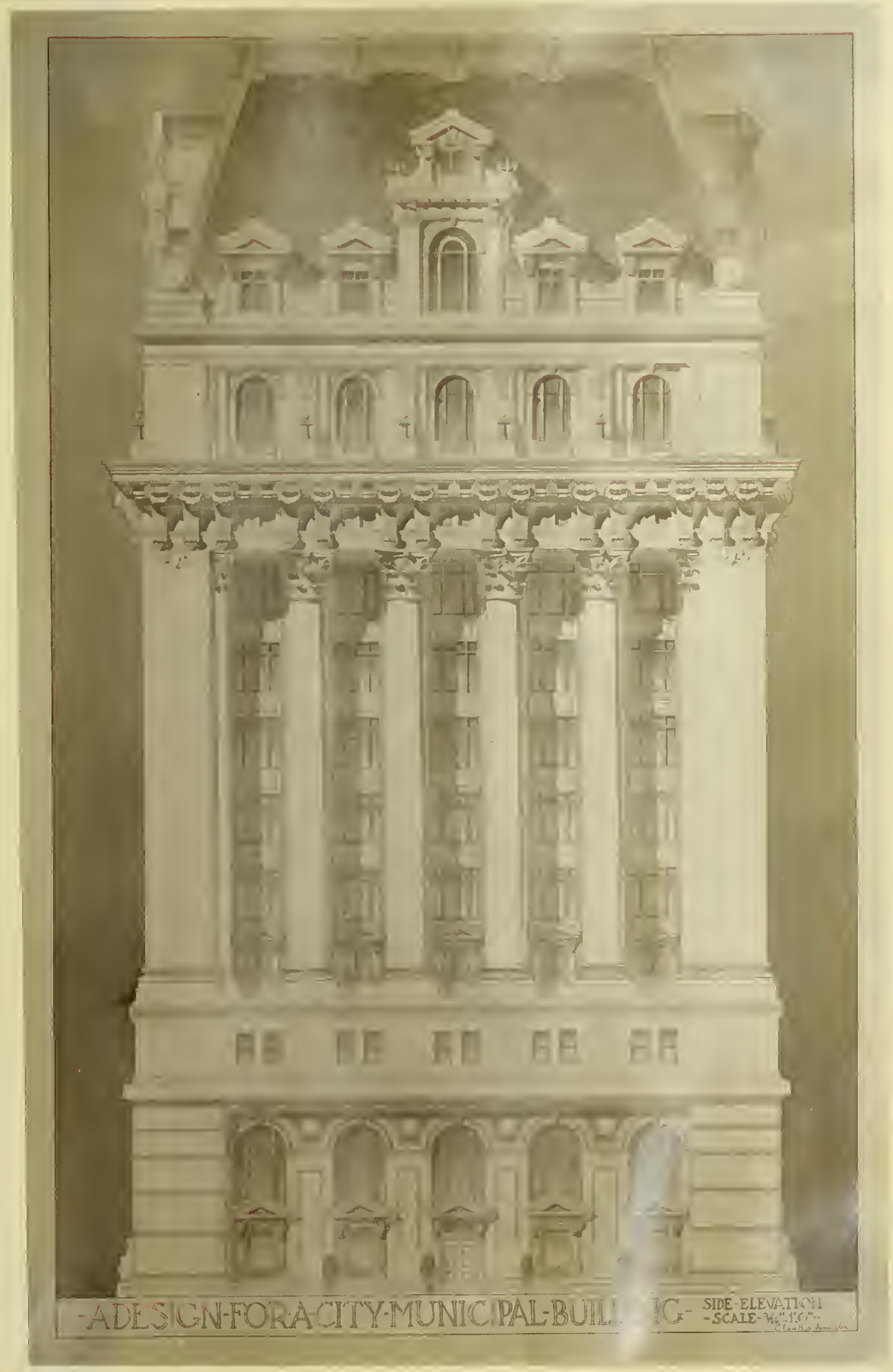

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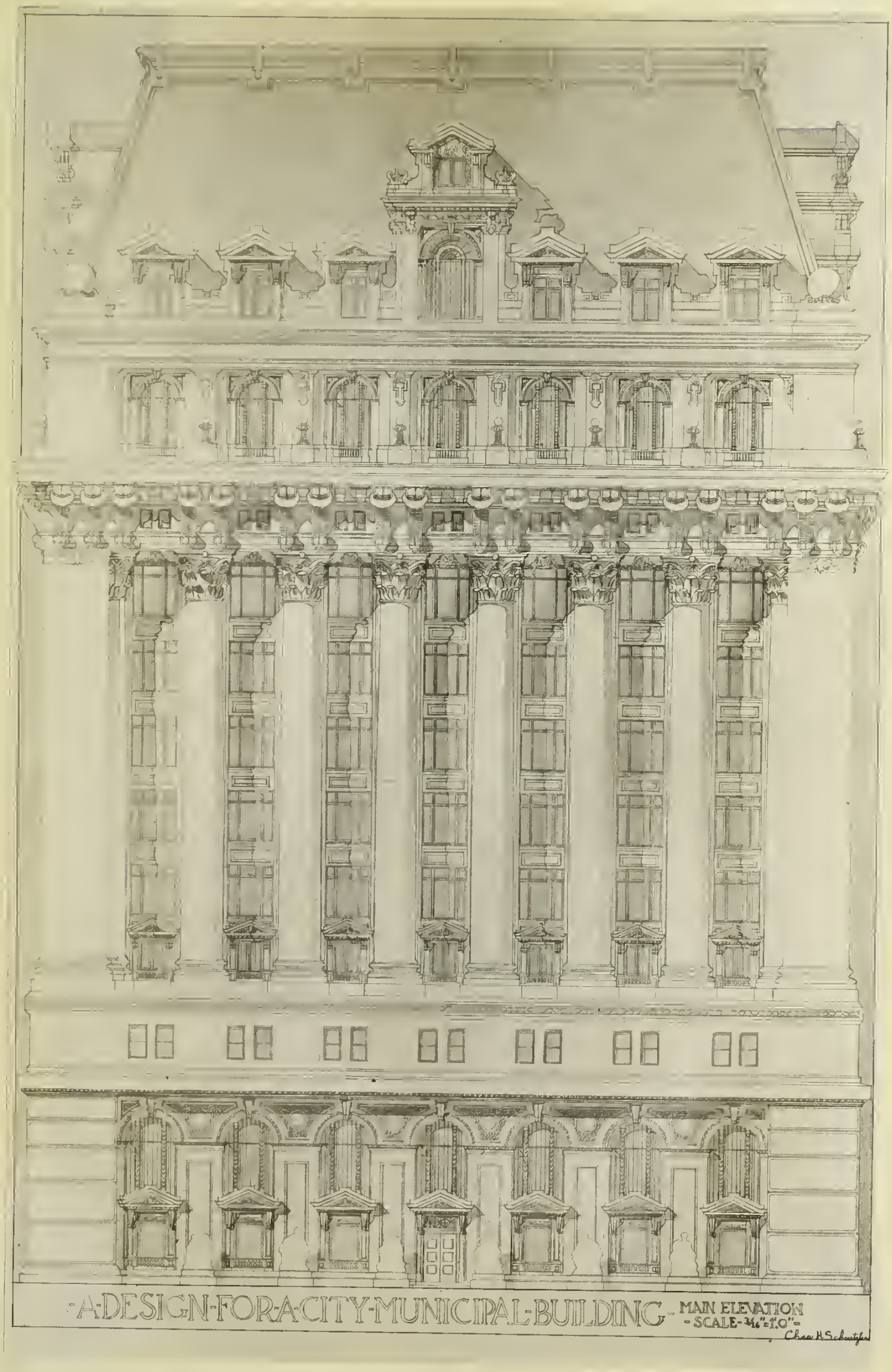
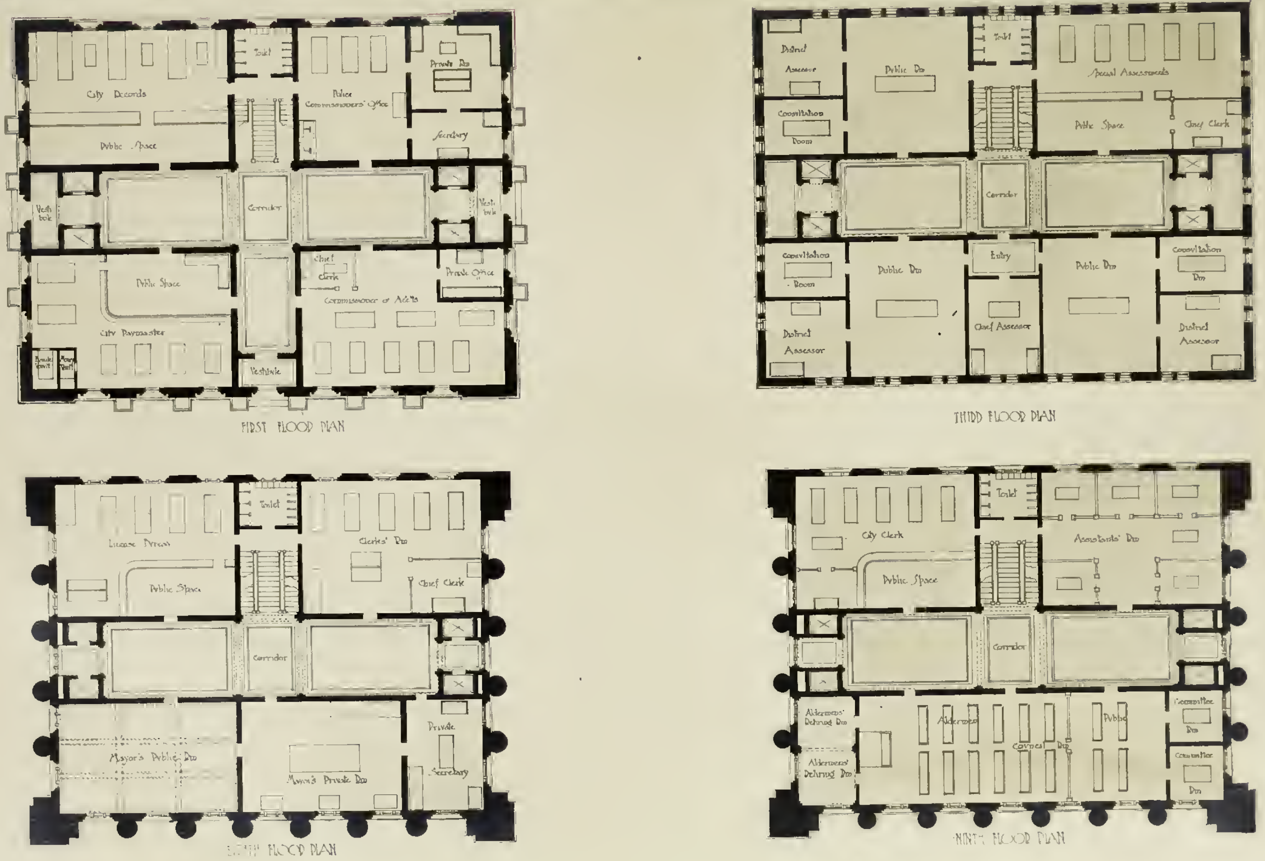
Photo of Drawing of Elevation.





A·DESIGN·FOR·A·CITY·MUNICIPAL·BUILDING·

FLOOR PLANS
SCALE·3/32"=1'0"·

Chas A [illegible]

Schedule.

First Floor.	Square Feet.
City Paymaster	2500
Public Room	
Private Room	
Commissioner of Accounts	1500
Commissioner of Police	2500
City Record	1800
Second Floor.	
Receiver of Taxes	6000
Two Public Rooms	
Private Room	
Office	
Commissioner of Jurors.	1700
Third Floor	
Board of Assessors	8000
Public Rooms	
Consultation Rooms	
Private Offices	
Fourth Floor.	
Water Register and Purveyor	3800
Public Rooms	
Private Rooms	
Finance	4000
Comptroller	
Auditing Bureau	
Fifth Floor.	
Finance	8000

Fifth Floor.	Square Feet.
Bureau of Arrears	5000
Clerks	1800
Files and Documents	1200
Sixth Floor.	
Board of Works	5500
Business Office	2800
Stenographers Room	500
Two Clerks Rooms	1000
Committee Rooms	1200
Chief Detectives Room	1500
City Counsel and Attorney.	1000
Seventh Floor.	
County Clerks	8000
Equity,Law,Certificate and Record Clerks	1600
Searchers and Lis Pendens	2400
Recording Clerks	2400
Judgment Clerks	1600
Eighth Floor.	
Mayor	6000
Public	2700
Private	1800
Clerks	1500
License Bureau	2000
Ninth Floor.	
Common Council	8000
Council Chamber	3000
Committee Rooms	1800

Ninth Floor (Continued)	Square Feet.
Assistants	1600
Clerks	1600

Tenth, Eleventh and Twelfth Floors.

Offices.

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Tabulation.

New York City Hall Competition.

Departments.	New York.	Clark.	Casey.	Raulsen.
City Paymaster	1800	1178	3170	3329
Commissioner of Accounts	1500	2000	2080	2377
Commissioner of Police	1200		1478	3385
City Record	600	1949	2061	3158
Receiver of Taxes	4200	8332	13408	12077
Commissioner of Jurors	450		1288	2738
Board of Assessors	500		10624	15861
Water Register and Purveyors.	1000		7534	7421
Finance	6600	16843	8870	27414
Comptroller	2200	1903	1748	2286
Auditing Bureau	850	3132	1380	4000
Bureau of Arrears	400	8484	2670	9766
Clerks		2295	1436	3500
Files and Documents	3150	1029	1636	1625
Board of Works	4575	5517	6813	
Business Office	2675	2410	3450	
Stenographers Office	325	608	782	
Clerks	650	2499	1891	
Committee Rooms	600		690	
Chief Detective	950	2539	2855	2616
City Counsel	700		2043	
City Attorney	400			
County Clerks	4200	19470	13113	20776
Equity,Law,Certificates.	1700	2914	2488	3006
Searchers and Lis Pendens	1500	10041	7185	10001

Tabulation (Cont.)

Departments.	New York.	Clark.	Casey.	Raulsen.
Recording Clerk.	500	4028	2668	4491
Judgment Clerk	500	2487	772	2400
Mayor	2150	5400	5348	7322
Public Rooms	750	2300	2700	2308
Private Rooms	980	1097	1300	1004
Clerks	420	2020	1348	2006
License Bureau	480		2772	2006
Common Council	4850	5243	8230	11641
Council Chamber	4000	2948	2835	3016
Committee Rooms	850		545	2634
Assistants		2295	4305	204
Clerks			545	1354
Total Area of Rooms	36155	68471	91687	122221.

A Design For A
A City Municipal Building.

In the discussion of this problem there are a number of considerations which demand the attention. The design is to be a new type, the first of its kind, but there can be no doubt as to its general acceptance in the future. The City Halls of to-day are inadequate in many ways, and do not contain all the departments necessary for the complete administration of a large city.

It is to be understood throughout this discussion that a city ~~hall~~ with a population of at least half a million people, is taken into consideration. In cities of this size there must be ample floor space allowance made for growth of the departments in the future. Practically all cities of this size are gradually increasing their population, while the more efficient ways of managing municipal matters, gradually gives rise to new departments.

A City Municipal Building would house all the principal departments, and will consequently have direct control of the city affairs. For convenience, the various departments must be so arranged as to make them accessible in accordance with their demand.

A building of this type should be isolated and not using any walls in common with other buildings and be given an individual site. This will give the best lighting facilities and be most satisfactory in every way. It should also be located in the center of the business district of the city so as to be the real administrative center with regard to the plan of the city.

However, the price of land in large cities is so high that it is impossible for a city to secure any large tract of land in the business center. This makes it necessary to limit the building to a small ground area.

The second consideration that influences the nature of this building is the character of the surrounding buildings. Being built in the business center, there can be no question but that practically all the other buildings will be high and approaching the skyscraper construction.

From this it can readily be seen that the city municipal building must be tall, if it is not to be overruled by the height of its surroundings. So with a limited ground area and the necessity for a tall building one arrives at the conclusion, that the departments must be arranged vertically, being divided into separate stories. This one change from the existin g types of city halls, makes the problem quite different from existing city hall construction.

Having decided upon the character of the building, it becomes necessary to determine its height. In order to make it compare with other buildings the total height of the building should be at least twelve stories. By dividing the necessary departments into stories it was found that the city offices would occupy the lower nine stories. This leaves three floors which it is proposed to use for general offices for the present, and this space will afford ample room for future expansion.

It has been deemed expedient to devote separate buildings to several divisions, and these will not be considered as a part of this problem. The police station being somewhat removed from

direct City municipal government will be separate and arranged in connection with the jails and other similar departments. The fire department with its stables, offices, and apparatus rooms will be placed in a building of its own. Then again the courts of the various kinds will be arranged in a separate building in connection with the judge, court and jury rooms which go to make up this division.

This design provides for the city departments which are directly connected with the municipal management of the city, and which one would readily expect to find in a building of this character. The relation of the divisions to each other have been carefully considered, and should give the best possible results.

The departments are arranged through out the building with a general regard for convenience to the public who have to use these departments. For this reason, on the first floor is the city paymaster the commissioner of accounts, the commissioner of police and the department of city records. These are always in demand by the public and should be easily accessible. This arrangement with regard to convenience is considered throughout, and it will no doubt prove to be an advantageous arrangement.

In a city municipal building, the design should be of a monumental character. The use of the orders in a prominent way, will best secure the desired result.

With a building of this character and height it is a difficult problem to make the proper subdivisions of the facade to appear natural and not artificial and forced. These conditions have led architects to express in the elevation, the divisions of a column. There must be a base, shaft and cap, each of which being made up of a group of stories. The shaft must be the tallest of these three, and should be the plainest and least varied, since plainness is here

needed to give effect to what elaboration there may be elsewhere. Variety here would also lead to confusion. The ornament must be concentrated at the base and capitals. At the base it is effective because of being near to the spectator, but care should be taken not to make it so delicate as to take away the appearance of vigor and strength necessary in a substructure. The ornamentation is made effective at the capitals by quantity. The shaft is plain and tall and must almost be monotonous, with the enrichment of the treatment at the top and bottom. For the shaft effect of the building it has been decided to use columns, as giving the best effect.

In studying modern buildings it has been found that the general tendency is to use the elevators almost entirely, instead of stairs. Stairways are only used in case the elevators are not running, or in travelling from one floor to the next, and only seldom in this latter case. The result of this, was a determination to use only one stairway in the building. This is is to be placed directly opposite the main entrance because of its accessibility and the added beauty of the entrance which may be secured through its use.

The elevators should be divided into two groups, and placed close to the end entrances to the building. This makes them easily accessible for every one, and certainly is the best possible arrangement. A car five by five feet gives good satisfaction at a nominal speed of 450 feet per minute. This would give about forty seconds interval for each trip of the elevator. For a building of this character, twelve stories in height, four elevators are necessary. This number is divided to make two elevators at each end of the building. Elevators should be made to lift 2500 pounds live load at full speed, should have the entire front readily removable and have the governing device seemed to give effect, [illegible]

Germany, were much alike [illegible]

[illegible] of the [illegible]

[illegible] 1890.

The [illegible]

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in the corner away from the door,so the rope or wheel will not be in the way when the door is open.The controlling device should be a wheel,lever,or switch,the latter being the best as it gives better command of the car.The guides should generally be placed in the corner of the well to economize in space.

All rooms of the departments should have ample light,the amount of window area being large enough to accomplish this.The top of the windows should not be more than one foot below the ceiling.Square headed windows are more effective than round headed windows as the volume of light from the top of the window is of much greater lighting value than that coming in near the floor,as it penetrates farther into the room.Under no circumstance should the window sill be nearer than twenty inches from the floor.The farthest desk from the window should not be more distant than twice the height of window head from the floor.

Toilets should be placed on every floor and be centrally located as far as possible.There should be three water closets for each fifty tenants but not less than three water closets on each floor, two wash basins supplied with hot and cold water,and two urinals. There should also be a cess pool in the floor with a bell trap and strainer,and draw cocks placed on the supplies for the use of the "scrubs",or there should be a slop sink placed in the compartment similar to the water closet\apartment,with both hot and cold water supplies;and with strainer placed in the waste.

Drinking fountains should be placed on every floor.Each department must be provided with a wash basin,which may have cold water alone,or both hot and cold.The water for the building,if too high for city pressure,is supplied by extra pressure in the building, either by tanks with pressure or by pumping water to a tank on the

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roof. From this source it is taken by gravity both for drinking and other purposes.

Heating and ventilation are closely related and must be considered together. Fireplaces are usually nuisances and take up valuable room. All rooms should have a vent, in connection with which fans could be used. Direct radiation, or at least radiators in the rooms should supply the heat, although the system might also be direct-indirect.

The building should be lighted primarily with electricity. For emergency it is well to have gas also. At least a single gas jet in each room, should be provided, which the "scrubs" would use. Each room should have at least five outlets; one in the centre ~~fr~~ of the room for a chandelier with its lights controlled by a switch at side of entrance door, and four ceiling lights near the corners of the room. Often these lights are made brackets but in most cases they prove in the way. In the larger rooms, the number of lights will be increased as is necessary to thoroughly light the room. The number of c.p. necessary to properly light a room is dependent on the number of feet of cubical contents. For every cubic foot of space, three hundredths (03) candle power should be figured. The junction box should have its rim flush with the plastering and covered with a small hard rubber bushing and small male screws. Inside the box are the fuses on a hard rubber base, and binding posts for the connection of fixture wires.

On each floor there must be the elevator wells, halls, stairs, and toilets, each of these require a certain amount of space and for economy of construction, it is desirable that the various floors be made duplicates, with regard to hall, elevator, stairs and toilet arrangments.

Elevator wells should be made one foot larger in each direction

than the size of the car.It should be plumb and true and protected from fire by wire glass.

The hall on the ground floor should be made as direct as possible from the street to elevators and stairs.

It would be necessary to use a steel frame,and the building can be treated as of the skeleton type,fire proofed.

In designing the machine ry hall it is necessary and important that the engines,pumps,switchboard and dynamos should not be restricted to damp or hot places.A power plant would be installed in the building.The best system for heating is the vacuum steam.It is flexible in amount of circulation attained so that the maximum may be applied at one portion of the pipe,and a less amount at others,depending upon stormy weather.District messenger,telephone and telegraph companies service enter the sub-cellar,and the wires are connected to the cable wires in the main connecting box,by means of numbered connections,which run to the boxes on all the floors.If any room in the building needs telephone or telegraph communication,it i is very easy to run a wire from the boxes in the hallway to the room.

In order to give an idea of the necessities of the different departments in the building,a brief description of their function and use,is here given.This will be considered with regard to the work the different parts do and the divisions necessary for each.

The city paymaster will have direct control of the official pay roll for city employees.In order to do this,he will have to keep the time of the men,and consequently a great deal of book keeping will be done in this department.As most of these books will be of great importance,a safe place must be near to keep them in.For this purpose,a book vault will open out of the book-keeping division.The employees will come here to get their orders on the city.These

orders serve as checks and will be cashed in accordance.A public room is one of the necessities for this department,since there will be a great many men come here to secure their pay and they will not be permitted to enter the main room.A money vault would also be of great convenience in connection with the payroll division.

The department devoted to the Receiver of Taxes will do all of the tax collecting.A large amount of money will be handled,since all money for taxes is to be paid here.All tax accounts will be received from the Board of Assessors (and turned in to the district assessors) and tax bills,receipts,etc.,made out in accordance.Ample room must be provided to accomodate the public,when it calls to pay.Large counters are to be arranged between these two divisions,and cages will be placed in the main room facing the public space,so money can be paid here.The office is one of the main divisions and it is from here that the affairs of the department will be supervised.

The department devoted to the Board of Assessors sees that all property in the city is given an assessed value,in order that it may be properly taxed.Assessors books are to be turned in here and properly checked over.After this has been attended to the reports go to the Tax department.A number of offices will be necessary here,to be devoted to the district assessors.From these district assessors, numerous individual assessors will be sent out over the city to assess the property value.These reports will be turned in to the district assessors,who in turn submit them to the Board of Assessors.Several consultation rooms will be necessary,for privately considering the assessed value of any property under discussion.Public rooms must be provided in order that the property holders may present their objections to the assessed value of their property.This is submitted before the board and they act in accordance with the [illegible] the [illegible]

made it one of the most [illegible], [illegible] [illegible] [illegible] be a great [illegible] and [illegible] [illegible] [illegible] be [illegible] [illegible] [illegible] will [illegible] [illegible] [illegible] [illegible].

The parallel [illegible] [illegible] of Thomas [illegible] the [illegible] [illegible] [illegible] from the [illegible] [illegible] [illegible] and [illegible] [illegible], [illegible] [illegible] [illegible]. [illegible] [illegible] by [illegible] [illegible] [illegible] [illegible] the public [illegible] [illegible] of the [illegible] division [illegible] [illegible] will be [illegible].

The development [illegible] [illegible] [illegible] purposes [illegible] [illegible] has [illegible] [illegible] have been [illegible] evidence placed before them. A division for special assessments is also necessary, as it is often found that certain assessments have been made beside the regular tax rates.

The water supply of the city is under municipal control, and so the distribution of the water is under the care of the Water Register and Purveyor department. All water rates are made here and collections for same are here conducted. Meter readings for all consumers are brought to this department. From the meter rates, bills are made out and charged against the property owners. This involves a great deal of accountancy, so a division is made for it. When mains are to be tapped or new pipes run for any new building, it is here that a permit for same must be obtained. In fact, the entire municipal, supply is controlled from this department.

All the city income is turned over to the Finance Department, and the paying out of money must eventually pass through this department to be checked over. It is here that the books of the different departments are audited to see that the proper sums are turned over to the city treasury. When the accounts have been verified the comptroller takes the money, and sees to its disposition. All orders on the city for money, come here and are entered against the department from which it was issued. In this way the condition of each department is known in this office. The Bureau of Arrears is located in the finance department, and it is here that old accounts are due the city, are to be paid. Tax arrears are sent in from the tax department and these are entered on the books, and must be paid to this division of the finance department. All other old accounts due the city are recorded here and collections for same are made through this Bureau of Arrears. In addition to the necessary books and money vault there will have to be divisions for stenographers, adding machines,

and a general office.

The department for the Board of Works is one of considerable importance with regard to the city government. All public improvements are recorded here, and supervision, during ~~r~~econstruction, attended to. Pavements, sidewalks, sewers and mains are brought about through the Board of Works. A division for the testing of cement and a chemists division should be arranged, in order that the materials used in construction could be properly graded. These could be placed on the main vault floor. A business office is the principal part of this department as it is where that contractors must come to receive their orders. The general public must first enter their petitions for improvements, here, and these are finally reported on by the board. The street and sewer divisions are in this department, and they have to see to the street and alley cleaning and sewer distribution.

The department for the County Clerks must be a large one as they have such a great variety of things to supervise. It is here that the reports and records of law proceedings with regard to municipal affairs, must be kept. All permits granted by the city are recorded here. Pending judgments against property and other proceedings regarding titles are investigated and entered in the division of Searchers and Lis Pendens.

The Mayors department is the real head of the city, and this is directly under the supervision of the mayor himself. His private room must serve two purposes; that is it must be a smaller office for himself and confidential secretary, and then it must be a place fitted to show the dignity of the office. The mayor has under his direct control, a division which keeps accurate records of the many departments necessary in the running of municipal affairs. For this purpose, a clerks room is placed near the Mayor where he may immediately

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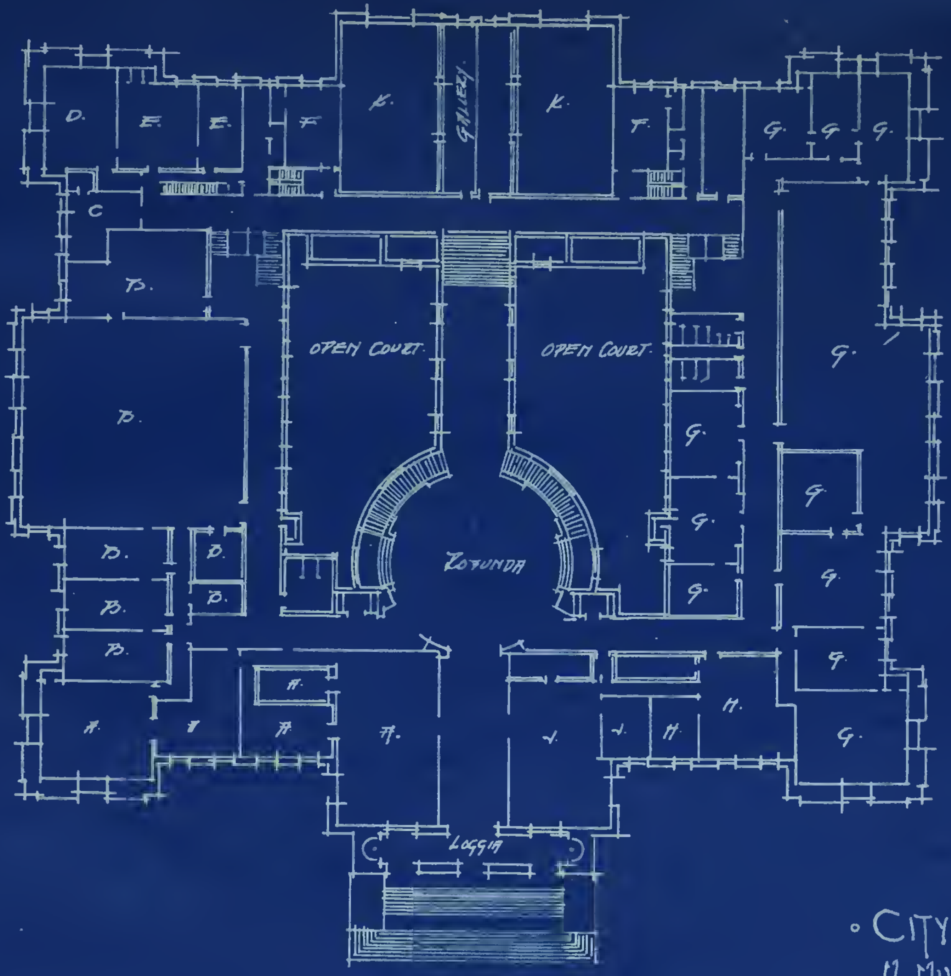
receive a condensed report of affairs in the different departments. A public room is also a necessity as it is here that the general run of visitors are received. Their complaints and desires are voiced here, when they are not considered of enough importance to be taken into the private office of the mayor, and carefully examined. A smaller stenographers room is also necessary for this department.

The Common Council department will serve as a meeting place for the council, and so a large council chamber is one of the necessities. This room will have, besides the members desks, seats for the public, as they are usually present at important meetings. Then of course the seats for the aldermen, should be divided from those of the public. In connection with this council chamber, there will be several smaller rooms for the committees to meet in and transact their business. The City Clerk should have his office on this floor in connection with the Common Council department. He will have to keep a record of the proceedings, and for this reason he will have a room for his assistants.

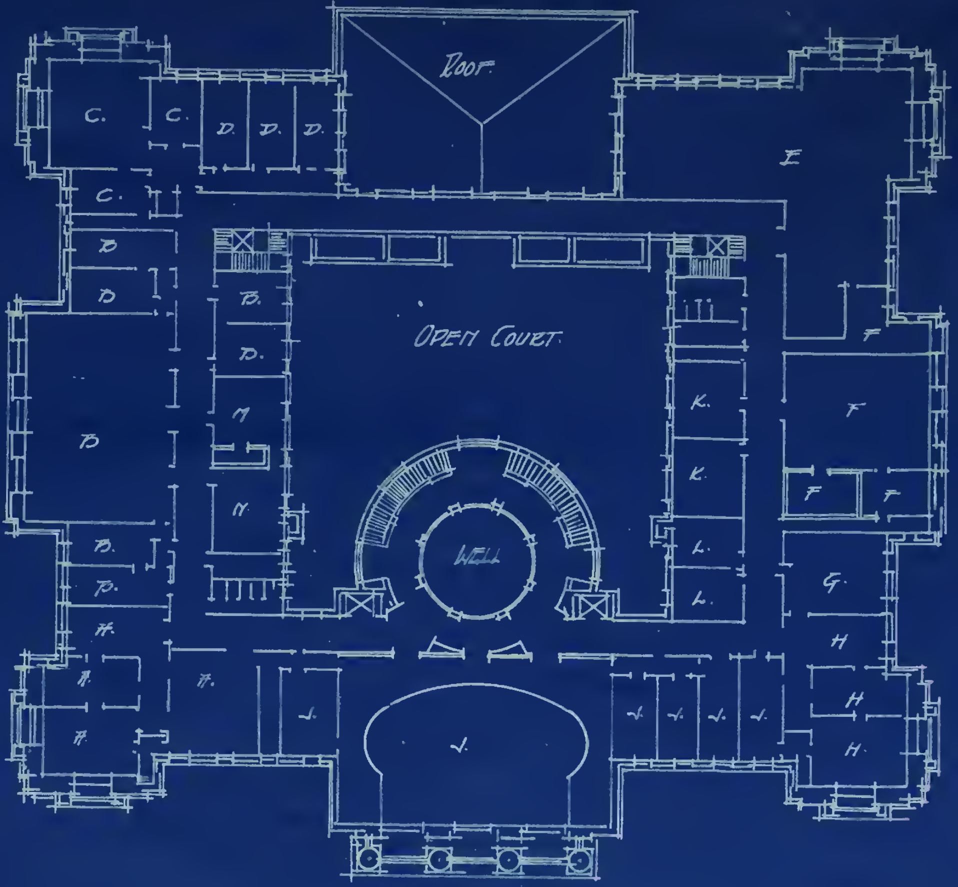
The upper floors will be so subdivided as to make them suitable for renting as offices. Consequently they should be arranged so as to secure the maximum rental area. Partitions should not be put in for permanency as it is intended that these floors will be used for municipal purposes, as soon as further space is necessary.



·FIRST· FLOOR· PLAN·

·SCHEDULE·OF· ROOMS·
A. COMPTROLLERS· SUITE·
B. STREET· AND· WATER· COMMISSIONERS.
C. PHOTOGRAPHER.
D. DOCTOR.
E DETECTIVE
F JURY· ROOM.
G TAX· DEPARTMENT.
H. AUDITOR
J TREASURER.
K. UPPER· PART· OF COURT· ROOM.

· CITY· HALL· NEWARK· N· J·
· McMURRAY· AND· COMSTOCK· ARCHTS·



·Schedule·of·Rooms·

A.·Mayor's·Suite·
B.·Board·of·Works·
C.·Police·Commissioners·
D.·Sleeping·Rooms·
E·Document·Room·
F.·City·Clerk's·Suite·
G·Library·
H·City·Attorney's·Suite·
J.·Common·Council·Suite·
K·Excise·Commissioners·
L.·Legal·Department·Clerk·
M·Sinking·Fund·Commissoners·
N·Assessment·Commissioners·

·Second·Floor·Plan·

·City·Hall·Newark·N: J:
McMurray·and·Comstock·Archts·

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